MARINE BIOSECURITY PORTHOLE: https://marinebiosecurity.niwa.co.nz/new-brains-sought-to-get-rid-of-marine-pests/

New brains sought to get rid of marine pests

Scientists have launched a worldwide crowdsourcing competition aimed at finding novel ideas to tackle invasive marine pests.

The competition, run by a consortium of biosecurity scientists from New Zealand, Australia, Canada and the USA, is open to anyone with "out-of-the-box ideas"•.

Project Leader and NIWA marine biosecurity expert, Dr Graeme Inglis says eradicating or controlling a population of invasive marine species were extremely difficult tasks and new thinking was urgently needed.

> "Invasions by non-native marine species are a growing problem for coastal ecosystems all around the world. They can have dramatic effects on native biodiversity, marine industries and recreation."
>
> "Attempts to eradicate marine pests or reduce their abundance have so far relied mostly on divers or shore-based observers spotting and removing them. This is labour intensive, expensive and often unsuccessful, meaning that the pests and their impacts are here to stay."

Dr Inglis says new approaches to pest management in marine environments need to be species specific, cost-efficient and capable of being applied over a large area.

> "There are difficulties working under water, the limited amount of time you can spend there - and the visibility which is not that great. So, finding a pest and killing or neutralising it without harming our native marine ecosystem is difficult. We need solutions that are sensitive to, and effective on particular pest species but which will not degrade the environments we are trying to protect."

The competition considers two technical challenges - finding a way to locate pests underwater so that they can be neutralized, and coming up with acceptable ways of killing them or preventing them from reproducing. The competition has been posted on the crowd-sourcing platform InnoCentive which connects organisations seeking ideas with a network of about 380,000 registered "Solvers"•.

Solvers are most likely to be scientists or engineers working in other disciplines but anyone can sign up. The idea is to tap into expertise that might not have previously been used in a marine setting.

> Read about the Challenge and sign up to become a Solver.

Dr Inglis says ideas may involve targeting a part of the lifecycle of a species that is vulnerable such as the eggs or larvae.

A cash prize of $US10,000 is on offer for the best idea with the winner being able to demonstrate that the solution has traction. The next phase would then be to develop a plan for research and implementation.

Dr Inglis says the competition is a new approach for marine biosecurity but he was confident there were smart people or companies who would be interested in developing solutions to help.

> "Someone may have developed technology for other applications but never thought of its application for biosecurity â€“ theyâ€™re the kind of people we want to try to bring in to solve this problem."

The challenge is open until 10th May and a winner will be announced on 22 June. It is sponsored by:

- Australian Government Department of Agriculture and Water Resources (DAWR),
- Government of Western Australia Department of Primary Industries and Regional Development (DPIRD), and
- New Zealand Ministry of Business, Innovation and Employment.

Results are adjudicated by scientists from:

- NIWA,
- Cawthron,
- University of Waikato,
- Australian Government Department of Agriculture and Water Resources (DAWR),
- Government of Western Australia Department of Primary Industries and Regional Development (DPIRD),
- Fisheries and Oceans Canada, and the
- Smithsonian Environmental Research Center.

Contact

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